10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

RUVBL1 (TIP49) Antibody (Center) Blocking peptide

Synthetic peptide
Catalog # BP1922a

Specification

RUVBL1 (TIP49) Antibody (Center) Blocking peptide - Product Information

Primary Accession Q9Y265

RUVBL1 (TIP49) Antibody (Center) Blocking peptide - Additional Information

Gene ID 8607

Other Names
RuvB-like 1, 49 kDa TATA box-binding protein-interacting protein, 49 kDa TBP-interacting protein, 54 kDa erythrocyte cytosolic protein, ECP-54, INO80 complex subunit H, Nuclear matrix protein 238, NMP 238, Pontin 52, TIP49a, TIP60-associated protein 54-alpha, TAP54-alpha, RUVBL1, INO80H, NMP238, TIP49, TIP49A

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP1922a was selected from the Center region of human RUVBL1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

RUVBL1 (TIP49) Antibody (Center) Blocking peptide - Protein Information

Name RUVBL1 (HGNC:10474)

Function
Possesses single-stranded DNA-stimulated ATPase and ATP- dependent DNA helicase (3' to 5') activity; hexamerization is thought to be critical for ATP hydrolysis and adjacent subunits in the ring- like structure contribute to the ATPase activity (PubMed:17157868, PubMed:33205750). Component of the NuA4 histone acetyltransferase complex which is involved in transcriptional activation of select genes principally by acetylation of nucleosomal histones H4 and H2A (PubMed:14966270). This modification may both alter nucleosome-DNA interactions and promote interaction of the modified

histones with other proteins which positively regulate transcription (PubMed:14966270). This complex may be required for the activation of transcriptional programs associated with oncogene and proto-oncogene mediated growth induction, tumor suppressor mediated growth arrest and replicative senescence, apoptosis, and DNA repair (PubMed:14966270). The NuA4 complex ATPase and helicase activities seem to be, at least in part, contributed by the association of RUVBL1 and RUVBL2 with EP400. NuA4 may also play a direct role in DNA repair when recruited to sites of DNA damage (PubMed:14966270). Component of a SWR1-like complex that specifically mediates the removal of histone H2A.Z/H2AZ1 from the nucleosome (PubMed:24463511). Proposed core component of the chromatin remodeling INO80 complex which exhibits DNA- and nucleosome-activated ATPase activity and catalyzes ATP-dependent nucleosome sliding (PubMed:16230350, PubMed:21303910). Plays an essential role in oncogenic transformation by MYC and also modulates transcriptional activation by the LEF1/TCF1-CTNNB1 complex (PubMed:10882073, PubMed:16014379). Essential for cell proliferation (PubMed:14506706). May be able to bind plasminogen at cell surface and enhance plasminogen activation (PubMed:11027681).

Cellular Location
Nucleus matrix. Nucleus, nucleoplasm. Cytoplasm. Membrane Cytoplasm, cytoskeleton, microtubule organizing center, centrosome Dynein axonemal particle {ECO:0000250|UniProtKB:Q9DE26}. Note=Mainly localized in the nucleus, associated with nuclear matrix or in the nuclear cytosol, although it is also present in the cytoplasm and associated with the cell membranes. In prophase and prometaphase it is located at the centrosome and the branching microtubule spindles. After mitotic nuclear membrane disintigration it accumulates at the centrosome and sites of tubulin polymerization. As cells pass through metaphase and into telophase it is located close to the centrosome at the early phase of tubulin polymerization. In anaphase it accumulates at the zone of tubule interdigitation. In telophase it is found at polar tubule overlap, and it reappears at the site of chromosomal decondensation in the daughter cells

Tissue Location
Ubiquitously expressed with high expression in heart, skeletal muscle and testis

RUVBL1 (TIP49) Antibody (Center) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

RUVBL1 (TIP49) Antibody (Center) Blocking peptide - Images

RUVBL1 (TIP49) Antibody (Center) Blocking peptide - Background

RUVBL1 possesses single-stranded DNA-stimulated ATPase and ATP-dependent DNA helicase (3' to 5') activity. It is a component of the NuA4 histone acetyltransferase complex which is involved in transcriptional activation of select genes principally by acetylation of nucleosomal histone H4 and H2A. This modification may both alter nucleosome - DNA interactions and promote interaction of the modified histones with other proteins which positively regulate transcription. This complex may be required for the activation of transcriptional programs associated with oncogene and proto-oncogene mediated growth induction, tumor suppressor mediated growth arrest and

replicative senescence, apoptosis, and DNA repair. The NuA4 complex ATPase and helicase activities seem to be, at least in part, contributed by the association of RUVBL1 and RUVBL2 with EP400. NuA4 may also play a direct role in DNA repair when recruited to sites of DNA damage. RUVBL1 plays an essential role in oncogenic transformation by MYC and also modulates transcriptional activation by the LEF1/TCF1 -CTNNB1 complex. High levels of autoantibodies against RUVBL1 are detected in sera of patients with autoimmune diseases such as polymyositis/dermatomyosistis and autoimmune hepatitis.

RUVBL1 (TIP49) Antibody (Center) Blocking peptide - References

Feng, Y., et al., Cancer Res. 63(24):8726-8734 (2003).Hawley, S.B., et al., J. Biol. Chem. 276(1):179-186 (2001).Ikura, T., et al., Cell 102(4):463-473 (2000).Salzer, U., et al., Biochim. Biophys. Acta 1446(3):365-370 (1999).Makino, Y., et al., Biochem. Biophys. Res. Commun. 245(3):819-823 (1998).